THE PLOUGH BOY.

BY S. SOUTHWICK.

"He that observeth the wind shall not sow, and he that regardeth the clouds shall not reap."—BUT—"He that tilleth his land shall have plenty of bread."—*Ecclesiastes.*

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FROM A LATE ENGLISH MAGAZINE.

POPULAR RETROSPECT

OF THE PROGRESS OF PHILOSOPHY AND SCIENCE.

Formerly it was esteemed extremely unphilosophical, and the very summit of ill breeding in scholarship, to vulgarise science by rendering it intelligible or useful. Pythagoras, Socrates, and Aristotle, kept their grandest speculations masked in symbols of mystery, for the sole use of their favourite disciples; and in modern times, natural philosophers, chemists, and physicians, have, in this, often followed in the steps of their ancient masters. In the earlier ages, indeed,—by many so ignorantly praised,—philosophy was a most useless and idle study; inapplicable to any earthly purpose, except, perhaps, to exercise the heads of a few devoted visionaries, who were looked upon by the rest of the world either as tinged with lunacy, or as having unhallowed intercourse with evil spirits. Nor was this wonderful, while philosophy was confined to the cloister and the study, and walked not abroad among the men of the world, except when veiled in darkness and mysteries.

Among other mighty achievements, the PRESS has dispelled much of this artificial darkness,—broken down the impertinent barriers of the schools, and torn the veil of mystery from the face of learned ignorance, and solemn stupidity. Science and philosophy, the pursuit of which was formerly little better than an apology for ignorance and idleness, have now become useful and popular, and begin to be domesticated in every family circle, from the peasant's cottage to the palace of the prince. Within a few years, a complete revolution has thus been effected in almost every branch of human inquiry and contrivance. The principles of husbandry, gardening, and mining, are hence becoming every day better known, and the practical results are quite wonderful. Besides, our halls, our theatres, and our streets, are most splendidly illuminated with gas;*—our edifices are protected from the stroke of the thunderbolt; our weightiest machinery, and even our ships are put in motion by the steam of water: our miners are shielded from the formerly destructive explosions of subterranean vapours;† in short, we cannot name a department of human convenience which has not lately received the most essential improvement from philosophy. And all—we boldly say, all this has been done by making UTILITY the main object of scientific pursuit, and by rejecting and scorning away all learned jargon, and the theories of dreaming speculation.

To promulgate in the most intelligible, brief, and popular form, whatever shall appear to us useful or worthy to be known, and to expose whatever may wear the aspect of unfounded pretension, or mystical nonsense, will be the aim of the sketches which we now offer, and shall occasionally continue. Our wish is to exhibit a comprehensive, bird's-eye view of all that is now doing by philosophers and men of science; to give an idea of the most recent improvements, as well as changes of retrogression, to our mere literary readers, and those who have not leisure to peruse the voluminous scientific Journals and Transactions daily publishing. We shall thus also give philosophers themselves an opportunity of seeing their labours fairly estimated by the high standard of utility, by keeping which constantly before us, we hope we shall be able to steer clear of all party-spirit and partiality.

GEOLOGY.

We shall begin with the almost new and romantic science of Geology, the object of it is to investigate the structure of the globe, and the rocks, &c. which compose its exterior; for of the interior little can be known, except that the nearer the centre the more dense and weighty are the materials composing it, which cannot, therefore, as has been supposed, be either air or water. Geology is, at present, perhaps the most fashionable of the sciences; and the number of able men now devoted to the study must soon bring it to great advancement. The most useful departments of this science are those which relate to mining for metals, coal, rock salt, and alum; to the comparative ability to withstand the weather; and, analogous to this, the crumbling of rocks, and the nature of the soil which they produce. On these subjects we have discoveries and facts published almost daily, but cannot here find room for an intelligible abstract. The more general principles of the science are employed in investigating the age of rocks, sand, gravel, and peat; and in determining whether these were formed by fire, by the sea, by lakes, by rivers, or by the changes of the weather.—It has been an inquiry of some interest in the science, to find a test by which to distinguish sea shells from fresh water shells; as in rocks where shells are found, such a test would at once determine their derivation. Mr. Sowerby has lately attempted something of this kind; but he confesses himself that he has not arrived at much certainty. The bones of an animal found imbedded in rocks, near Maestricht and Vicenza, which had hitherto puzzled Cuvier and other eminent naturalists, have been determined by Sommering to belong to a species of lizard, which, from its great size, he calls the giant lizard. It is now unknown, but he conjectures that it is the Dragon of antiquity, so universally, though (if he is right) falsely reputed fabulous. This enormous lizard is twenty-three feet in length. A plate of the

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* Cocoanut oil, for producing gas for family use, proposed by Messrs. Taylor and Martineau. It is without smell, yields a very bright flame, and is economical.

† A Mr. Lester says, the safety lamp is a dragon that lures the miner to destruction, by giving him confidence to work in the midst of fire damp; but affording so scanty a light, that he is often tempted to open the skreen, and the surrounding gas explodes, and kills him. There is, we doubt not, some truth in this.—Mr. Lester has discovered a mode of drawing off the fire damp.

bones may be seen, Ann. Phil. ii. 183, N. S. We need not, after this, despair of finding in some rock or gravel pit, the skeletons of centaurs, griffins, harpies, or even that of the renowned Pegasus.

MINERALOGY.

The circumstance most worthy of notice in this science, at present, is the ambitious attempt of M. Mons, of Freyburg, the successor of the celebrated Werner, to establish a jargon of new names, extremely uncouth and lengthy; a combination of Greek, Latin, and Teutonic. We are sorry to see Professor Jamieson and Mr. Brade lending their aid to the propagation of these barbarisms.

Almost every scientific journal announces the discovery of new minerals; but we are usually very sceptical as to the genuineness of these novelties so frequently thrust on our notice; for we cannot often perceive a greater anxiety to make out a discovery to be new, than to identify the examined mineral with species already known.

BOTANY.

The study of Botany, lately so fashionable, is rather on the decline, owing we have no doubt, to the great minuteness, and the absolute barrenness of the Linnæan system. This system, which was for many years quite unrivalled, seems to be rapidly falling into the back ground, and the more abstruse and equally useless system of Jussieu, is coming into favour, and has already attained a prominent place in the elementary works. Mr. Brown and Dr. Hooker, are our most eminent botanists, and non passibus aquis, Sir J. E. Smith; but utility is the very last object which these gentlemen seem inclined to pursue. The forming of divisions and sub-divisions, and the idle practice of making names, and drawing up useless and minute descriptions of flowers, leaves, &c. form the pursuit of all eminent botanists. Sometimes, indeed, they find a spare corner in a page, for a note on the utility of a plant, or on the peculiarities of its growth and physiology, but this is very rare.

Physiological, or rather useful botany, is rapidly advancing under the care of the Horticultural Society, and by the talents of Mr. Knight, who deserves the richest credit for his experiments on the food of plants, and on the ripening and propagation of fruits. Mr. Drummond also has made the interesting discovery that the green mosses known by the common name of CROW SILK, so frequently seen on moist walls, decayed trees, bare patches of ground, and stagnant water, are not, as supposed by Linnæus, Hedwig, and others, a particular sort of moss, called by them, CONSERVÆ, but are merely the young plants of the PINE MOSS, and others of a similar kind.—This is intelligible enough, and is amply proved by his ingenious experiments; but what are we now to make of the numerous species of CONSERVÆ minutely described and figured in our books?

ZOOLOGY.

We have to record, under this department, the same decline of the system of Linnæus as we have just mentioned respecting botany.—Lamarc, a French naturalist, discovered that insects, and several others of the less perfect animals, differ from quadrupeds, birds, and fishes, in being destitute of a spine or back bone; and Cuvier, another French SAVANT, of great industry and talent, took up the hint, and made it the basis of a new arrangement, we think, to supercede the precise and uninteresting system of Linnæus. And, if we must have a learned array of barbarously compounded names for animals, that of Cuvier is rather more natural than the "tooth and nail" work of the Swede, which makes the whale a quadruped, and ranks the bat next to man in the order of things, because of the way in which it suckles the young bats.

Under the head of Geology we have seen Sommering's wonderful discovery of the ancient dragon. The discovery of the unicorn of our royal arms, which is said to have been recently made in Thibet, by Major Latter, and in Southern Africa by Mr. Campbell, will tend much to weaken our faith in the dogmatism of naturalists, and to put more credit in history, though it should be contemptuously called fabulous. The newly discovered animal is described by Major Latter, exactly as we have so often seen it figured,—with the body of a fine formed horse, and a single horn in his forehead. We shall examine the evidence of this discovery more scrupulously, as soon as it comes before us more in detail.—M. Latrielle, a French naturalist of some eminence, has, in imitation as we suppose, of Humboldt's geography of plants, given a very brief sketch of the geographical distribution of insects. This is a subject of great curiosity, but there are few facts yet ascertained respecting it, from the want of general observations by collectors, those personages being usually much more anxious to add a specimen to their box, than to record any thing concerning its habits or its history. M. Latrielle, however, thinks he can prove that warm and cold countries have scarcely any insects in common, and also that under the same parallels in countries which are distant, the species are entirely different. This conclusion does not at all correspond with what Humboldt found to hold in the vegetable kingdom, namely, that nearly the same species flourish in the most distant countries, when the climate and temperature are the same.

METEOROLOGY.

If we were to estimate the advancement of a science by the number of its observers, we should say that meteorology is making progress towards perfection. Except, however, the nomenclature of the clouds by Mr. Howard, and the experiments of Dr. Wells on dew, we recollect nothing which merits the name of a great or important discovery in the science. Mr. Farey has lately proposed a method of studying the nature of the phenomena of falling stars, which, we doubt not, might help to fill up a column of a meteorological table, could he persuade any body to pursue it; for we do doubt whether Dr. Foster himself—Mr. Farey is out of the question—or any other meteorologist, would sit for two hours every night, with his eye fixed on a central star, ready the instant he should see a falling star to call out "mark" to his assistant. It would, we conceive, be more productive in the way of discovery, to sweep the sky for comets.

ELECTRICITY AND MAGNETISM.

We class these together, because the only thing new of any importance respecting either, is the very interesting discovery of their connexion, by M. Oersted, of Copenhagen, whose experiments have been repeated by Sir H. Davy and several other British philosophers of distinction. The subject may be considered as still in its infancy, but we sanguinely anticipate that it will terminate in some great practical result. We are very much in the dark respecting the agents by which electric, galvanic, and magnetic effects are produced. Of one thing we are very certain that these agents are not fluids as they are often foolishly denominated; or if, forsooth, they must be called so, we must call upon those who thus use the term for a new definition. At the hazard of being thought credulous, we would infer from M. Oersted's discovery, that there may be something real in animal magnetism, for believing in which we have not spared to ridicule the credulity of the Germans. The efficacy of electricity itself, in curing disease, has lately fallen into disrepute, though the facts of its power are strongly established on the evidence of some of the most distinguished names in the profession. Two very singular cases occurred recently. One is given on the authority of Professor Olmsted, of a man who had a paralytic affection of the face and eye, and being slightly struck during a thunder storm, was, in consequence, completely cured. A similar cure was affected at Perth, on a man who had been troubled for many years with a tremulous affection of his whole body, which was completely removed by a shock he received during a thunder storm. These facts are worthy of record, and should induce the profession to give electricity, and even magnetism, a more accurate and fair trial than perhaps has yet been done.

OPTICS.

The polarization of light, as it is called, has for several years engaged almost the undivided attention of opticians; and Dr. Brewster has been so industrious for experimenting and collecting facts, that he has formed an entire system of mineralogy on the basis of polarization alone. We wait with some anxiety for its publication. Mr. J. W. Herschel has distinguished himself in a similar line of inquiry. The doctrine of Sir I. Newton, respecting the

production of colours, by the thickness or thinness of laminæ or plates, kas been frequently impugned, and, we think, with success. If the experiments, however, of Mr. Charlton, (Ann. Phil. ii. 182, N. S.) be correct, colours may, in some cases, such as enamelling, be produced by mechanical division and communication.

(TO BE CONCLUDED IN OUR NEXT.)

FOR THE PLOUGH BOY.

SETTING FRUIT TREES.

MR. SOUTHWICK,

If the following is worthy of notice, give it a place in your useful paper.

Some years past, having occasion for setting out a young orchard, after staking out my ground at about 30 feet distance, I carried from my barn yard well rotted moist manure, and dropped about one bushel for every tree. I trimmed my trees carefully with a sharp knife; proportioning the top to the root, cutting of the tap root if too long, and slanting the branching roots on the under side to set horizontally on the earth, shortening those too long;—and in digging my holes was careful to proportion them to the roots that none might be distorted from their rational course. Having a number of bushels of flax seed that had been too much damaged for market, I carried it into my field, and in setting my trees carefully mixed about one quart or three pints of flax seed, with the earth and manure, to each tree, equally mixing them in setting the trees; gently shaking the tree, whilst setting, a little up and down, to mix the earth close round the roots; setting the tree about two inches lower in the earth than they stood in the nursery, and treading the earth round them. From this method I did not lose one tree in an hundred; they all grew, and continued to grow remarkably thrifty. I do not recollect the exact season of my setting, but believe it about the last of April, which is a season I should recommend for that mode of setting.—In this mode of setting the flax seed soon congeals with the earth and manure, and forms an oily nutritious pulp, like the white of an egg, of a very healing quality to the wounded roots of the tree; and retaining its natural qualities for a considerable length of time.

Respectfully your's,

E. BUEL.

VETERINARY.

CUTTING.*

A horse is said to cut when he wounds the inside of the Fetlock joint with his foot in travelling. This may arise from various causes, the most common of which seems to be an improper position of the foot; the toe, instead of being in a line with the point of the shoulder, inclining either inward or outward. In the latter case we generally find that the inner quarter of the hoof is lower than the other, and that the faulty position of the foot depends upon this inequality of the quarters; it must be obvious, therefore, that the remedy in this case consists in lowering the outer quarter, and making the inner branch of the shoe thicker than the other. When the toe inclines inward, it renders a horse liable to cut on the inside of the knee, at the lower part of the joint; this is termed the speedy cut, from its happening upon the trot or gallop, and is considered as a dangerous failing in a horse, the violence of the pain which the blow occasions sometimes causing him to fall very suddenly. The remedy for this is to keep the toe as short as possible, that being the part which generally inflicts the wound, and to alter the improper position of the foot. Cutting frequently depends upon weakness or fatigue, and is therefore very liable to happen to young horses when rode hard over deep heavy ground. The only remedy in this case is to avoid the cause until the legs acquire more strength, or to protect the wounded part with leather, or a boot, as it is termed.

Whenever a horse cuts, it is advisable to ascertain what part it is that inflicts the wound, and this may often be done by applying tar to the wounded part; this will of course adhere to that part of the hoof or shoe which comes in contact with the wound. Should it be the edge of the shoe, which I believe is seldom the case, the cause may be easily removed by the farrier; whatever part of the hoof it may be; it should be rasped away as much as can be done with safety, and particular attention paid to the position of the other foot, which, if improper, should be improved as much as it can be by shoeing.

* White's compend.

Weekly Summary.

DOMESTIC.

The Baltimore Patriot, of June 15th, remarks, that Baltimore has entirely escaped the commercial embarrassments, which have been felt so severely in the more eastern towns.

Mr. Clay is again a candidate for Congress, from his old district in Kentuckey.

A late and more correct estimate of the loss by the late fire at Baltimore, in the neigborhood of M'Elderry's wharf, makes the total amount 123,000 dollars.

The Eversham Association, in Pennsylvania, have published their annual address against the use of ardent spirits. The Association is composed of Quakers, a sect which has ever been on the alert in works of benevolence.—They shew conclusively that ardent spirits are not necessary to sustain labouring men—and they appeal with energy to young men, to unite by example and precept in banishing the use of the poisonous draught. We fear, however, the dram drinkers will pay little attention to these worthy and benevolent Quakers.

The expense of the contemplated canal from Worcester to Providence, is estimated at 500,000 dollars. The expense of a Rail Way from Worcester to Boston is estimated at less than two-thirds of that sum. An able and satisfactory essay on the comparative advantages of Canals and Rail Ways, would be read with deep interest by many at the present moment.

In Philadelphia, there are now building, and about to be built, two new churches, a penatentiary, a theatre, and a new orphan asylum, on the ruins of the old one. The theatre is to be a very splendid one.

The Presbyterian church at Patterson, N.J. was struck by lightning on the 20th ult. The steeple considerably shattered. The main building but slightly damaged.

After a protracted session of seven years, Gen. Peter B. Porter, and the Hon. Anthony Barclay, commissioners under the 6th article of the treaty of Ghent, with their secretaries and agents, met at Utica on the 10th inst. and have concluded amicably the business assigned to them. But whether the United States have gained any thing by the decision, time and facts must determine.

A few days since, as the boat on the western canal was passing through a guard lock at Oriskany, a woman put her head out of the window, when it was caught between the boat and the lock, and crushed so severely that she survived but a few hours.

The New England Religious Tract Society published the last year 468,000 Tracts, and expended $8,300. Above 70 clergymen were made life members by contributions of their followers. During the same year the New-York society sold and distributed 143,831 Tracts, of which more than 12,000 were French and Spanish. Some of them were sent to the black president of Hayti.

A son of Mr. Amos P. Ketcham, aged 5 years, was drowned at Poughkeepsie, on the 22d ult. by falling into the steam boat slip.

In Tioga county Jonathan Todd was convicted of blasphemy and sentenced to 30 days imprisonment and fined 40 dollars.

William Borthwick, cashier of the East Lothian Bank, in Scotland, who robbed that institution of 42,000 pounds, and fled to the United States, was arrested on his arrival at Savannah, Georgia, on the 10th inst. The court decided he could not be held to trial on criminal process. He was afterwards detained by a ne exeat, and not being able to find bail was locked up.

Capt Stockton, of the U. S. Schooner Alligator, has made a liberal donation of specimens, brought from Africa, to the cabinet of natural history, belonging to the college of Princeton. The example of Capt. Stockton ought to be followed by every American navigator who visits remote regions, and has an opportunity of advancing the cause of science.

LETTERS ON ENTOMOLOGY.

[By Kirby and Spence.]

LETTER III.

METAMORPHOSES OF INSECTS.

Were a naturalist to announce to the world the discovery of an animal which for the first five years of its life existed in the form of a serpent; which then penetrating into the earth, and weaving a shroud of pure silk of the finest texture, contracted itself within this covering into a body without external mouth or limbs, and resembling more than any thing else an Egyptian mummy; and which, lastly, after remaining in this state without food and without motion for three years longer, should at the end of that period burst its silken cerements, struggle through its earthy covering, and start into day a winged bird,—what think you would be the sensation excited by this strange piece of intelligence? After the first doubts of its truth were dispelled, what astonishment would succeed! Amongst the learned, what surmises!—what investigations! Amongst the vulgar, what eager curiosity and amazement! All would be interested in the history of such an unheard-of phenomenon; even the most torpid would flock to the sight of such a prodigy.

But you ask, "To what do all these improbable suppositions tend?" Simply to rouse your attention to the metamorphoses of the insect world, almost as strange and surprising, to which I am now about to direct your view, —miracles, which, though scarcely surpassed in singularity by all that poets have feigned, and though actually wrought every day beneath our eyes, are, because of their commonness, and the minuteness of the objects, unheeded alike by the ignorant and the learned.

That butterfly which amuses you with its ærial excursions, one while extracting nectar from the tube of the honeysuckle, and then, the very image of fickleness, flying to a rose as if to contrast the hue of its wings with that of the flower on which it reposes—did not come into the world as you now behold it. At its first exclusion from the egg, and for some months of its existence afterwards, it was a worm-like caterpillar, crawling upon sixteen short legs, greedily devouring leaves with two jaws, and seeing by means of twelve eyes so minute as to be nearly imperceptible without the aid of a microscope. You now view it furnished with wings capable of rapid and extensive flights: of its sixteen feet ten have disappeared, and the remaining six are in most respects wholly unlike those to which they have succeeded; its jaws have vanished, and are replaced by a curled-up proboscis suited only for sipping liquid sweets; the form of its head is entirely changed,—two long horns project from its upper surface; and, instead of twelve invisible eyes, you behold two, very large, and composed of at least twenty thousand convex lenses, each supposed to be a distinct and effective eye!

Were you to push your examination further, and by dissection to compare the internal conformation of the caterpiller with that of the butterfly, you would witness changes even more extraordinary. In the former you would find some thousands of muscles, which in the latter are replaced by others of a form and structure entirely different. Nearly the whole body of the caterpillar is occupied by a capacious stomach. In the butterfly this has become converted into an almost imperceptible thread-like viscus; and the abdomen is now filled by two large packets of eggs, or other organs not visible in the first state. In the former, two spirally-convoluted tubes were filled with a silky gum; in the latter, both tubes and silk have almost totally vanished; and changes equally great have taken place in the economy and structure of the nerves and other organs.

What a surprising transformation! Nor was this all. The change from one form to the other was not direct. An intermediate state not less singular intervened. After casting its skin even to its very jaws several times, and attaining its full growth, the caterpillar attached itself to a leaf by a silken girth. Its body greatly contracted: its skin once more split asunder, and disclosed an oviform mass, without exterior mouth, eyes, or limbs, and exhibiting no other symptom of life than a slight motion when touched. In this state of death-like torpor, and without tasting food, the insect existed for several months, until at length the tomb burst, and out of a case not more than an inch long, and a quarter of an inch in diameter, proceeded the butterfly before you, which cover a surface of nearly four inches square.

Almost every insect which you see has undergone a transformation as singular and surprising, though varied in many of its circumstances. That active little fly, now an unbidden guest at your table, whose delicate palate selects your choicest viands, one while extending his proboscis to the margin of a drop of wine, and then gaily flying to take a more solid repast from a pear or a peach;—now gamboling with his comrades in the air, now gracefully currying his furled wings with his taper feet,—was but the other day a disgusting grub, without wings, without legs, without eyes, wallowing, well pleased, in the midst of a mass of excrement.

The "grey-coated gnat," whose humming salutation, while she makes her airy circles about your bed, gives terrific warning of the sanguinary operation in which she is ready to engage, was a few hours ago the inhabitant of a stagnant pool, more in shape like a fish than an insect. Then to have been taken out of the water would have been speedily fatal;—now it could as little exist in any other element than air. Then it breathed through its tail; now through openings in its sides. Its shapeless head, in that period of its existence, is now exchanged for one adorned with elegantly tufted antennæ, and furnished, instead of jaws, with an apparatus more artfully constructed than the cupping glasses of the phlebotomist—an apparatus which, at the same time that it strikes in the lancets, composes a tube for pumping up the flowing blood.

The "shard-born beetle," whose "sullen horn," as he directs his "droning flight" close past your ears in your evening walk, calling up in poetic association the lines in which he has been alluded to by Shakespeare, Collins, and Gray, was not in his infancy an inhabitant of air; the first period of his life being spent in gloomy solitude, as a grub, under the surface of the earth.—The shapeless maggot, which you scarcely fail to meet with in some one of every handful of nuts you crack, would not always have grovelled in that humble state. If your unlucky intrusion upon its vaulted dwelling had not left it to perish in the wide world, it would have continued to reside there until its full growth had been attained. Then it would have gnawed itself an opening, and having entered the earth, and passed a few months in a state of inaction, would at length have emerged an elegant beetle, furnished with a slender and very long ebony beak; two wings, and two wing-cases, ornamented with yellow bands; six feet; and in every respect unlike the worm from which it proceeded.

That bee——but it is needless to multiply instances. A sufficient number has been adduced to show, that the apparently extravagant supposition with which I set out may be paralleled in the insect world; and that the metamorphoses of its inhabitants are scarcely less astonishing than would be the transformation of a serpent into an eagle.

These changes I do not purpose explaining minutely in this place: they will be adverted to more fully in subsequent letters. Here I mean merely to give you such a general view of the subject as shall impress you with its claims to attention, and such an explanation of the states through which insects pass, and of the different terms made use of to designate them in each, as shall enable you to comprehend the frequent allusions which must be made to them in our future correspondence.

(TO BE CONTINUED.)

From the Minerva.

NORTHERN TOUR.

Mr. Editor,

As your paper is justly becoming a desideratum in fashionable circles, permit a reader to point out to those of that description who intend making a summer's tour to the north, how they may best enjoy all the advantages to be derived from such a tour.

With men of taste, it is no trivial object of a jaunt to the Springs and the Lakes, to enjoy the scenery of the country; the verdant hill;

e cultivated and blooming vale; the rush- water-fall, and the sublime prospect from e mountain top.

Were I to start from New-York for Ball- on Spa, in the Steam-boat, I should land at atskill, for the purpose of enjoying the moun- in scenery which lies in the back-ground of at flourishing village. I should hire a suita- le carriage, a strong one-horse wagon, with n able-bodied, docile horse; and with this cility I would ascend the mountain by the LOVE ROAD, which commences at the base of , nine miles back of Catskill, and presents ne of the grandest Alpine ways in the world, t every step of which the imagination is indled into vivacity, and delighted by the ild majesty and grandeur of the scenes which resent themselves in this awful solitude.

Having reached the mountain-top, or rath- r the first summit, stop at Mr. Parmentier's, ho is an excellent guide, and who will con- uct you to the KAATERSKILL FALLS and the INE ORCHARD, at both of which places you ehold such amazing beauties, stamped by the and of God on the matchless forms of his cre- tion, as are, I believe, not to be met with in y other part of the globe.

After being satisfied, if the sensitive soul er can be satisfied, with those unrivalled ndscape views, you may either return, and ke the boat again at Catskill, or (descend- g by the way of Col. Lawrence's tavern) roceed on to Albany, through the beautiful le of Kiskatominy to Madison village, and ence along the still more beautiful vale of oxsackie, to the old town of that name.— rom Coxsackie to Albany, either the upper oad, or that which runs along the river, may e taken, with about an equal chance of con- mplating the ordinary beauties of sylvan, ru- l and pastoral scenes. If by this route you ave the mountain in the morning, you may reakfast at Col. Lawrence's, dine at Captain ish's, at Coksackie, and take tea at any of e numerous and well-stored hotels in Albany.

From Albany to Waterford, is a delightful de, whether you go through Troy and Lan- ngburgh, or keep the west side, and cross e Mohawk at the Cahoes Bridge, from which ou have an interesting view of the Cahoes alls. The west side is perhaps to be prefer- d at present, as it affords an opportunity of ewing several miles of the Grand Canal in a ate of rapid progression. In going and re- rning, however, the ride on both sides may enjoyed; and here it may not be amiss to ggest, that in passing through Troy and nsingburgh, you need step but a mile or o out of your way, to view the Falls of ount Ida, near Troy, and the sublime pros- cts from the Diamond Rock, and the Bald ountain, in the vicinity of Lansingburgh.

The hotel of DEMAREST, at Waterford, is e of the best in the State. Mr. D. is active, liging, and vigilant in preserving order and cency throughout his establishment. Mrs. emarest is a well-bred woman, who perfect- ly understands her business, and from whom ladies will never fail to receive the most po- lite attention. The house is large—the rooms spacious and airy, and neatness, cleanliness and good taste, pervade all the internal econo- my of the premises. Mr. D. is rarely with- out the fine flavoured Pike and Bass, fresh from the Cahoes Falls, where these excellent fish are caught daily, and brought to the hotel at a moderate price.

From Waterford to the Spa Waters, Mr. Demarest will point out the most agreeable route, and furnish every facility the traveller can wish for.

I might here conclude this brief article.— But I will not do so, without once more re- commending to all travellers for health, plea- sure and improvement, who ascend the Hud- son, to stop without fail at the CLOVE ROAD, the KAATERSKILL FALLS, and the PINE OR- CHARD, on the Catskill mountains. My atten- tion to these sublime scenes was first attracted by an article in THE PLOUGH BOY, published at Albany. The description given was scien- tific, as well as sentimental, if the latter term may be allowed. They struck me, in the de- scriptive, as well worthy of being visited by a love of nature in her wild as well as artificial attire. In the style of Cæsar, I may say "I came—I saw—and was delighted;" and not merely delighted, in the ordinary sense of the term; for words are utterly inadequate to ex- press the sensations created, or convey even a faint idea of the impressions made upon the mind and the heart, by what I then, for the first time beheld. In fact, for the first time in my life, my enjoyments exceeded immeasura- bly my anticipations; the half had not been told; indeed it could not be told, even by the able writer of the article above alluded to, and I was soon satisfied that the glories of the Cats- kill heights are altogether inexpressible, inde- scribable. To a companion, a gentleman of the highest literary and philosophical attain- ments, who reclined upon the verge of the pre- cipice, at the PINE ORCHARD, I said, "when do you wish to go, sir?" "I could sit here till the day of judgment, if permitted," was the prompt and energetic reply, coming from a heart enraptured by the unspeakable beauties of creation that were spread out before us.

If, Mr. Editor, you deem this hasty, imper- fect sketch, worthy a place in the columns of so interesting and valuable a paper as THE MINERVA, it is entirely at your service, togeth- er with my best wishes for the success of your infant establishment.

A TRAVELLER.

FROM THE LONDON FARMERS' JOURNAL.

TO THE EDITOR OF THE FARMERS' JOURNAL.

ON THE CULTIVATION OF MANGEL-WURZEL.

SIR, Kilton, April 5, 1822.

As partisans of great influence have given their opinions, that superabundance of home productions has been the cause of the existing agricultural distress, I have, in consequence, hesitated whether I should lend my hand (fee- ble as it is) to detail experiments in the culture of mangle wurzel; because, if those opin- ions were the emanation of profound know- ledge, and if Mr. Ricardo's notions of it (who is reported, in the New Times, of February 12th, in the debates on Mr. Brougham's mo- tion on Agricultural Distress, to have said that, "By diminishing the quantity of that produce was the true mode of relief,") merit atten- tion, the cultivation of mangle wurzel ought to be discontinued, because I consider, that that vegetable possesses the property of pro- ducing, from a given quantity of land, more nutritious produce, in the shape of milk, but- ter, &c., and animal food, (and if "muck is the mother of the mow",—then of corn also) than any vegetable in common cultivation.— But as I cannot exactly fall in with those opi- nions, not having forgot the 30,000,000 bush- els of corn, foreign produce, imported in the years 1818 and 1819, besides the deluge of 1814 and 1815, and the immense quantity of wool hides, tallow, &c. &c. of the same de- scription, competing, duty or tax free, or at inadequate duties, with our domestic produce so heavily taxed, which has been so long op- erating against the cultivators of this country, I therefore trust I shall not contribute or add to the presure, already quite sufficient, if I should throw any light on, the cultivation of mangle wurzel, by detailing my experience in its culture. I will proceed numerically with the mode I have adopted the last seven years,—on the different kinds of soils, the ma- nures applied, and in what state; the imple- ments found useful in depositing the seed, and cleaning the growing crop: preservation of the roots, &c. First remarking, that all the preceding crops were clover-lay wheat, ma- nured for, with a compost of farm-yard dung and soils, except No. 6, which was fallow wheat, manured with calcined clay-sub-soil; and that the soils were prepared for the man- gle wurzel crops by fallowing as for potatoes or turnips.

The 1st was on a fertile gravelly, or stone- brash soil*; recent stable-dung having been recommended by a Hatfield correspondent (Farmers' Journal, Vol. 7, page 122) I used it freely for this crop, and which was placed in 27-inch drills, and covered with the soil by a double mould-plate plough; the seed was then dibbled over it, the plants kept clean by manuel and horse hoeing: and here I must (as altercations have taken place, whether manures are essentially necessary, or other-

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NOTES BY THE EDITOR.

We hope our correspondent, whose general accuracy is well known, will pardon the notes which follow:—

* These two soils are quite different from each other; the term stone-brash appears to be often misapplied.

wise, for the production of a crop) remark, that those growing on the largest portion of dung was the worst shaped; that they were forked, having no tap root, and many were blown out of the soil by hard winds, and proved a light crop.

The 2nd was on a heavy stone brash, manured liberally in the same way, with a compost of farm yard dung, and soil well mixed, and nearly putrescent: neatness being an object, I passed a turnip-roller and drill on the ridges, the coulter of which left a shallow cavity or drill on the centre, in which were dropped the seeds, and covered with a common hay-rake: the crop had a remarkable neat appearence, and was heavy; and here I have again to remark, that those plants at and near the headlands, that had but little or no manure, were the handsomest, and nearly equal in size.

The 3rd was on a soil of nearly the same description, with a marly subsoil, and the same system adopted, but the plants were attacked by the slug (the only enemy they have, that I have noticed when in an infant state,) and would have annihilated them, if I had not sent ducks to attack them in turn: the plants that escaped became a great size.

The 4th was on an extremely tenacious clay, but fertile when pulverized; recent dung was ploughed in with the wheat stubble and prepared for the seed ast he preceding: the soil being of that description, all "iron" or "mire," was, from the almost continuation of rain in March, April, and till the 13th of May 1818, rendered of the latter description, and was unfit to receive the seed till the 25th; the weather suddenly changing to extreme dry till the 17th of June; till then the plants made but little progress; but the genial rains, &c. afterwards produced a rapid vegetation, till the middle of November, and produced some large and handsome roots; but the gross product was light.

The 5th, was on a soil similar to the first, and the kind of manure, &c. as the second; the seeds were dibbled at 12 inches distant in the drill on the 13th of April, and covered by merely passing a small besom over the holes: the crop was good, but a large portion ran to seed, no doubt from too early sowing.

The 6th was on a piece of extremely heavy clay land, and I believe as stubborn and unfertile as any to be found; heretofore unproductive for almost every thing but wild oats and coltsfoot: the same preparation of the soil as the preceding experiments; but no manure of any description applied: having experienced much trouble in getting the seed deposited precisely, while putting in this crop I thought of a plan, and having a carpenter at hand, I had a round stick four inches in diameter, and five feet six inches long, split with a saw, which (when performed) represented two pieces similar to the two sides of a ladder, in which I had eight 1 1-4 inch wood-pins affixed, at 9 inches apart, to the half round side, and tapered to 2 1-4 inch long; with a handle to the flat side, and the last pin put into the last hole, the maker (the term I gave it) being pressed down by the foot, executed the holes for the seed with the greatest accuracy, regularity, and dispatch; the seed being dropped into the holes (one in each) was covered in expeditiously, and effectually, by passing a stick, about 2 inches in diameter, flattened at the end, over the holes. The summer of 1820 being a dry one, I experienced much difficulty in pulverizing the soil between the rows, till I used, in the horse-hoe, irons made on the principle of those invented by Mr. Blaikie of Holkham; which I found most effective for the purpose: the roots were very regular, and handsome, and the crop much greater than I expected it would have been; and convinced me, that mangle wurzel may be cultivated with success, on the most stubborn clays, and which I recommend to every person keeping a cow, or a pig, notwithstanding the new fangled theory.

The 7th and last crop, was in the same field as the third. Having noticed the issue of an innumerable quantity of small lateral fibres from the sides of this plant during its vegetation; considering them conductors of nutriment, and that putrescent vegetable or other matter the best pabulum,† a compost of dung and soil (prepared in the autumn) was ploughed in with the wheat stubble: the succeeding ploughings, harrowings, &c. well mixed it with the soil: the seeds were committed to it the 7th and 18th of May, on the principle of the preceding crops. Had not the slug partially destroyed the plants in an infant state, the crop would have been a very large one: the roots were large, and well shaped; and notwithstanding the partial destruction of the plants, it was the largest crop I ever cultivated, or have ever seen; which I attribute, in a great measure, to the intimately mixing the manure with the soil. Having stated thus much on the cultivation, I will now add a few remarks on the preservation, &c.

As ripeness in this vegetable is desirable, as well as in most others, I have generally deferred stacking, or storing them, till the latter part of November, or till the appearance of frost; I then have them carted to a hedge having a south aspect, with a caution not to bruise them; and then have them set up as close together as possible in the position they grow: thus disposed of, ‡ the leaves will protect the roots against a sharp frost, but if severe, could be easily protected when straw at hand: the storing then goes on, which I perform by cutting off the leaves, and placing horizontally a layer five feet broad at the b (tap roots outward,) and continuing in a co cal shape to four feet high, thus formed, w straw placed on the sides so as to conduct wet that may filter through the covering heavy rains, and to keep the earth from roots, which should be at least, to prote against a very severe frost, eight inches dee well beaten with the back of a spade, by wh a store of valuable keep may be secured midsummer, or longer if necessary.

While detailing the culture, I forgot state, that the seed may be steeped, and into a state of vegetation with safety and a vantage; which was very conspicuous in m last crop; independent of setting the crop grow before it is committed to the ground, as it may happen before it is ready; but seed vegetated will have the precedence the annual weeds, and facilitate the first ha hoeing. Time will not allow me to wr more at present on this valuable vegetab but to subscribe myself your most obedie servant.

C. ADDAMS.

† This remark is doubly important, as it shews that autumn ploughing, and broadcast dunging (performed in autumn), are best for mangle wurzel. Indeed we should have thought that no other method could produce it on stiff land.

‡ We should be glad to know how many acres were annually included in these experiments? This tedious method of saving the roots, must be impracticable on a large scale. No roots keep so well; and if carefully stacked in ridges, on dry ground, and covered with plenty of straw or stubble, they will keep sweet. This applies to yard preservation, and to moderate quantities.

THE PLOUGH BOY.

ALBANY: TUESDAY, JULY 16, 1822.

We copy the following article from the Democratic Press. It does credit to the enterprising spirit of Mr. Rose, whose example, we hope, may not be without its effect on the farmers of New-York, as well as those of Pennsylvania. By the cultivation of maple sugar the cause of benevolence, as well as that of national prosperity, is promoted; since for every pound thus produced, by the culture of freemen, there is one pound the less to be manufactured by the sweat of slavery's brow. We have in our possession a sample, manufactured by Mr. Ira Mills, of New-Haven, and left with us by Dr. Wm. G. Hooker, Middlebury, which is of a beautiful light colour, and as fine as the best of the brown sugars from any of the island or continental plantations. We hope, that both Mr. Rose and Mr. Mills may be induced to furnish the public with their process of manufacturing and

ing this salutary, and, in this age of luxury, dispensable article of human sustenance.

MAPLE SUGAR.

We are obligingly furnished with a small quantity of Maple Sugar, made in Susquehanah county by Robert H. Rose, Esq. It was exhibited before the agricultural society and obtained the Premium. It may be seen at this office for three days. In brightness, grain and colour, it has the rich appearence of the Louisiana Sugar. Mr. Rose would do a public service if he were to publish the whole of the process by which this sugar was made.—This gentleman has been to our, knowledge, a settler in Susquehannah county for about 20 years. How muchgood he has done, and how greatly he has contributed to the settlement of that county, is too well known to make it necessary for us to notice. There are hundreds who can do justice to the liberal and hospitable style in which he lives.—DEM. PRESS.

The following POEM is from an unknown correspondent. It appears to be an imitation of BEATTIE'S HERMIT; yet the author may never have seen that beautiful production.—How far the imitation has succeeded, if intended as such, we leave the reader of taste to determine. One of our correspondent's couplets runs thus:

"From Sin's deadly grasp, who is able to save,
"And light up a smile on the night of the grave."

One of Beattie's couplets runs thus:—

"But when shall Spring visit the mouldering urn!
"O when shall it dawn on the night of the grave!"

There are several other resemblances; and yet, as we observed above, it may be that our correspondent never read Beattie's Poem.—About ten years ago, on a certain occasion, we wrote a poem, such as it was, which was published; and severeal years afterwards we found a line of it VERBATIM in a Poem of Lord Byron's, which was written in England, on a similar occasion to that which called forth ours, and so nearly simultaneous as to preclude the possibility of plagiarism on either side: And certain we are, that when we penned our line, we thought it original, so far as any modern idea can be so; our ancient namesake's "NOTHING NEW UNDER THE SUN," to the contrary notwithstanding.

MR. EDITOR,

The following verses were written on an evening of November last. If you think them worthy a place in your useful paper, you are at liberty to publish them.

J. C. J******.

WATERVLIET, July 5th, 1822.

FOR THE PLOUGH BOY.

'Tis Autumn, and chill blows the evening breeze,
While twilight in silence spreads over the vale;
The frost-faded leaves round me fall from the trees,
And silent the song of the sweet Nightingale.
The beauties and sweets of the landscape are fled,
The rose, and the myrtle, and lily are dead,
The loveliest forms that bespangled the earth,
Are lovely no more, but are sinking in death.

No longer the birds with their melody fill
The fields and the meadows, late smiling and green;
In sable attire mourns the storm-beaten hill,
And winter's dread ruin must soon close the scene.
'Tis Autumn and night, but for this I don't grieve,
Tho' the chill'd flowers fail and the sweet songs of eve;
The myrtle and rose will again deck the vale,
And the night again welcome the sweet Nigthingale.
But I too must fall like the leaf from the tree,
And when will the spring again dawn upon me.

The Sun late in splendour gave birth to the morn,
And light, life and love spread his glorious way;
But now when his life-giving rays are withdrawn,
Lo! night treads the path of the swift flying day.
So mortals in splendour and glory may rise,
Like quick passing meteors which blaze thro' the skies;
But their Sun quickly sets, and in death's dreary gloom
They fall and obscurity rests on their tomb.

The Sun ever faithful his course to pursue,
With nature's best gifts will again bless the day;
The Seasons revolve, to their change ever true,
And again bring the charms and the blessings of May:
But where is the Sun to dispel the thick gloom,
The darkness expressive which plays round the tomb:
From sin's deadly grasp, who is able to save,
And light up a smile on the night of the grave!

O sin! must thy dark form, thy wintery breath,
O'er frail human nature thus endlessly reign!
Must creation's pride sink too deeply in death,
For love without bounds to redeem and regain.
Great Father of life, thou unknown sea of love,
Thy wish is thy law thro' the armies above:
O! teach us to know thee, and thy will be done,
And may all be blest with the gift of thy Son.

Thine Almighty arm met with none to oppose,
What justice and truth in thy mercy ordain'd;
When Chaos gave way and Creation arose,
And order, and beauty, and harmony reign'd.
The earth knew the sound of thine Omnific word,
And Heaven's bright arches acknowledg'd Thee Lord:
What wisdom devis'd, love pronounc'd *let it be*,
And Death's darkest shades were made useful by Thee.

The Sun and the Stars started forth at thy call,
The worlds on thy fingers were balanc'd in air;
Thine Omniscient mandate gave laws to them all,
And varying millions rejoic'd in thy care.
O! may all thy millions unite and rejoice,
When the world thou hast made shall dissolve at thy voice;
When thrones and dominions before thee shall fall
And Creation bows to Thee, great ALL IN ALL!

When time with its tumults and sorrow shall cease,
And death in destruction shall own thy ways just;
When discord shall smile at the whispers of peace,
And all opposition shall crumble to dust:
The Sun then no longer shall measure our days,
Too dark are his beams, and too feeble his blaze!
The LAMB that was slain, who yet lives, and was dead,
Will light, love and life thro' immensity shed!

His rays the dark realms of the grave will illume,
And light the glad smile on the night of the tomb!
May the horrors that o'er the frail Sinner's Urn play,
Be buried and lost in the blood-purchas'd day:
May our Infinite Sun then give Infinite light,
That space may be pleas'd with the absence of night
When order again will pervade the vast whole,
And Eternity's wave will in happiness roll.

POETRY.

We have, in other countries, made frequent enquiries after the author of the following exquisite Stanzas, but hitherto in vain. We shall state all that is known respecting this fine production of the amatory muse, which must have the effect, rather, of exciting, than of gratifying curiosity. They were first inserted in a Novel that did not obtain the popularity its merits seemed to deserve; and, they subsequently re-appeared in the "LYRE OF LOVE" —but they are still not generally known—nor sufficiently well appreciated. We have an Elegy by the same author for our next number. These beautiful Poems are supposed to have been written by a lovely and highly accomplished young lady, who resided in the vicinity of Southampton, (England.) We shall be very thankful for any information relative to the charming author. As effusions of genuine passion, and refined sensibility, they have been seldom equalled, perhaps never surpassed.—UP. CAN. GAZ.

THE EXSTACIES OF LOVE.

"Awake, my Harp, some joyful measure!
No longer breath a pensive strain;
Be, like my soul, attun'd to pleasure,
And never mourn again.

Awake, my Harp, some joyful measure!
'Twas love that taught thy strings to move;
And love now fills my soul with pleasure—
Then hymn the charms of love!

O love! some call thy musings folly,
Some call thee cruel, base, and blind;
But thou, methinks, art pure and holy,
Exalted, rais'd, refin'd.

And some there are who can dissemble,
The raptures of thy ardent flame;
And some poor maidens start and tremble,
If they but hear thy name.

Ah! though thy charms were all illusion,
Such dear deceits I still would seek!
Thy mantling blush, thy soft confusion,
Thy looks that more than speak.

Thou know'st, O love! how I have blest thee,
How oft for thee my heart hath beat;
How oft in sorrow I've carest thee,
And thought thy sorrow sweet.

O! love some call thy musings folly;
Some call thee cruel, base, and blind;
But thou, methinks, art pure and holy,
Exalted, rais'd, refin'd.

FROM THE LONDON FARMERS' JOURNAL
April 15, 1822.

QUERIES ON THE CULTIVATION OF FLAX.

BUCKWELL, near BRISTOL, April 4, 1822.

SIR,

Having turned my attention to the cultivation of Flax, and noting the observations with which your paper has at various times afforded me information, I shall feel myself obliged by your promoting the discussion of this most important subject. My individual interest is particularly engaged in a manufactory of the article, purchasing the stem direct from the farmer, without dew-retting or watering, which enables him to make a very quick return; and that, in some instances, the past year's crop has paid 10l. to 12l. per acre. It needs no further comment, than the present eagerness of old growers, with the addition of very many new ones, to cultivate it this year; and within the circuit of 20 miles of my own farm, I can safely say there will be four acres to one of the past year. It has long been a staple commodity in this county (Somerset), and a weekly mart at Yeovil for the Yorkshire spinners, exclusive of the sail-cloth manufactories in that part, as well as at Bridport, &c. I have thus premised my Queries, to shew it is a subject wherein much interest exists. The information desired, is;—

Whether the practice of sowing salt in equal quantity with the seed, has of late been practised in this country, and what the results?

Sir John Sinclair, in his Code of Agriculture, Appendix, page 29, refers to Mr. Lee, of Endfield Wash, near London, for such practice. Much do I wish the Agricultural Committee had turned their thoughts on, and offered an encouraging bounty for, the cultivation of flax. That which now exists is, I believe, 4d. per stone of 24lb., but whether on the stem as pulled, or the flax rendered fit for yarn, is to me a doubt; nor can the Act be procured in these parts, to explain.—Can you inform me?

An early reply will much oblige me. I am, Sir, your very obedient servant,

ROBT. FUGE.

P. S. I am now sowing about 160 acres to flax, and not an acre of wheat or barley.

GLUTEN AN ANTIDOTE FOR CORROSIVE SUBLIMATE.

From the Lon. Med. and Phys. Jour.

It has been observed by TADDLE, that, on mixing either the deutoxide or deutochloride (corrosive sublimate) of mercury with the gluten of wheat, the latter separated from the water it contained, and, losing at once its viscosity and elasticity, became instantly converted into a hardy body, capable of remaining for a long time under water without any dissolution or fermentation. He also observed that, on mingling wheat-flour with a solution of corrosive sublimate, it became impossible to separate the gluten from it in the form of strings.—He concluded thence, that the mineral retained this substance, and that, by means of it, it combined also with the starch and other constituents of the flour. It appeared, then, that flour or gluten might serve as an antidote to sublimate, when administered as poison. Some experiments he afterward made, led him to believe that the gluten reduced the deutochloride to the state of protochloride, (calomel,) exactly in the same manner as albumen does; and that the gluten of wheat retains the mercury much more forcibly than albumen, recommended for the above purpose by Orfila. His experiments were made on rabbits and fowls. He administered, at first, two grains of sublimate mixed with flour or gluten, and gradually carried the quantity to fourteen grains in the course of ten hours, without causing the animals any apparent uneasiness.—Some of them only, died at the end of three or more days, and he then always found the balls of gluten and the mineral entire in the digestive organs; which shows how easy it would be, after the administration of the antidote, to remove the whole by an emetic. Some comparative experiments prove that a single grain of sublimate, administered alone, would produce death in the above-mentioned animals; and that from twenty to twenty-five grains of fresh gluten, or half the quantity of it dried, are necessary to neutralize one grain of the mineral. A proportionate quantity of water, would appear to be the best antidote to the sublimate; and this can be more readily obtained than albumen in many situations. It would be prudent, indeed, for apothecaries to keep it ready in their shops for this purpose.

A Mr. Goodman, of Southampton, (England,) has taken out a patent for a material improvement in stirrup-irons. It consists in the introduction of a cross-bar, bearing a spring within the open bottom of the stirrup iron, to support a false bottom which rises and falls according to the motion of the horse, and of course gives great ease to the rider; the horse is also relieved from any sudden pressure, and the weight of the horseman being carried upon an elastic instead of a solid body, there is less probability of the saddle-tree ever breaking.

It is announced in the Journal de Medicina Prattique of Berlin, that the Balladonna is a preservative against Scarlet Fever. The fact was first discovered at Leipsig, but it has lately been confirmed by several experiments.

☞ COMMUNICATIONS and SUBSCRIPTIONS for this paper, received at the PRINTING-OFFICE, No. 87, South-Pearl-Street. All letters from abroad, directed to the EDITOR, Albany, will be duly attended to.—Each volume comprises twelve months, or fifty-two numbers—the numbers are issued weekly on Tuesdays, and the volume commences the first Tuesday in June.

TERMS.—THREE DOLLARS PER ANNUM PAYABLE IN ADVANCE.